

CLAIMS

WE CLAIM:

1. In combination a power supply and electrically operated architectural covering device, the power supply including:
 - a voltage or current source having a varying voltage output;
 - an electrical device; and
 - 5 a voltage converting unit electrically coupling the voltage or current source to the electrical device, wherein the voltage converting unit includes a step-up converter and wherein the voltage or current source is the sole supply of power to the voltage converting circuit, which thereby is self-starting from a situation of rest.
2. The combined power supply and architectural covering device according to claim 1, wherein the voltage or current source is a solar cell generating a voltage of less than 0.5 V.
3. The combined power supply and architectural covering device according to claim 2, wherein the electrical device is a battery.
4. The combined power supply and architectural covering device according to claim 1, wherein the electrical device is a battery.
5. Electrically operated architectural covering device, including:
 - a first rail;
 - a covering member extending from the first rail;
 - an electric motor for opening and closing the architectural covering device;
 - 5 at least one photovoltaic cell;
 - a rechargeable power source;
 - a first circuit electrically coupling the at least one photovoltaic cell to the rechargeable power source; and

10 a second circuit electrically coupling the electric motor to the rechargeable power source, wherein the first circuit includes a step-up converter and wherein the electric motor is mounted to the first rail.

6. Electrically operated architectural covering device according to claim 5, wherein the rechargeable power source is a Nickel Metal Hydride accumulator.

7. Electrically operated architectural covering device according to claim 5, wherein the step-up converter includes a MOSFET semiconductor element.

8. Electrically operated architectural covering device according to claim 5, wherein the step-up converter includes a Schottky diode.

9. Electrically operated architectural covering device according to claim 5, wherein the second circuit includes a further step-up converter for increasing the voltage of the rechargeable power source to a level necessary for the operation of the electric motor.

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10. Electrically operated architectural covering device according to claim 5, wherein the photovoltaic cell is adapted to be fixedly mounted to an inward facing surface of the first rail.

11. Electrically operated architectural covering device according to claim 5, wherein the rechargeable power source is a metal hydride accumulator.

12. Electrically operated architectural covering device according to claim 5, wherein the rechargeable power source is alkaline manganese battery.

13. Electrically operated architectural covering device according to claim 5, wherein the rechargeable power source is a lithium ion battery.

14. Electrically operated architectural covering device according to claim 13, wherein the rechargeable power source includes a plurality of lithium ion batteries in series connection.

15. Electrically operated architectural covering device according to claim 5, wherein the rechargeable power source is a 3.6 V battery system.

16. Electrically operated architectural covering device according to claim 5, wherein the covering member comprises an extendible and retractable pleated window covering.

17. Electrically operated architectural covering device according to claim 5, wherein the covering member comprises an array of operatively interconnected slats, each having an open and a closed position within the covering member.

18. Electrically operated architectural covering device according to claim 5, wherein operation of the electric motor does not exceed 40 seconds per day.

19. Electrically operated architectural covering device according to claim 18, wherein the electric motor operates on 12 V DC.

20. Electrically operated architectural covering device according to claim 18, wherein daily power requirement of the electric motor is about 50 mWh/day.

21. Electrically operated architectural covering device according to claim 20, wherein the electric motor operates on 12 V DC.

22. A drive assembly for a covering of an architectural opening, comprising a motor, an accumulator connected to the motor, a solar cell, and an electrical circuit connecting the solar cell to the accumulator, wherein the electrical circuit comprises a

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- step-up converter that transforms fluctuating voltage or current from the solar cell to
- 5 DC current to charge the accumulator.